AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of Claims:

1.   (Currently Amended) A biconical antenna for wireless communications, comprising:

a conical upper conductive body and a conical lower conductive body having a common apex, which is used as a power feed point,

wherein a space between the conical upper and lower conductive bodies is filled with a dielectric material having a curved boundary surface such that ~~a shortest distance connecting the conical upper and lower conductive bodies along a surface of the dielectric material is a curve at which~~ an incident angle of an incident wave incident on the boundary surface of the dielectric material through the dielectric material from the common apex is a Brewster angle over the entire boundary surface of the dielectric material.

2.   (Currently Amended) The biconical antenna as claimed in claim 1, wherein the ~~curve~~ curved boundary surface is a log-spiral ~~curve~~ curved boundary surface.

3.   (Original) The biconical antenna as claimed in claim 1, wherein a dielectric constant of the dielectric material is between about 4 - 50.

4.   (Original) The biconical antenna as claimed in claim 1, wherein the dielectric material is selected from the group consisting of high-density glass, dielectric ceramic, and engineering plastic.

5.   (Original) The biconical antenna as claimed in claim 1, wherein a length of

the conical upper conductive body is shorter than a length of the conical lower conductive

body.

6.   (Original) The biconical antenna as claimed in claim 5, wherein the length of

the conical upper conductive body is at least $\lambda_0/4$, wherein λ_0 is a wavelength when a usable

impulse is the minimum frequency.

7.   (Currently Amended) The biconical antenna as claimed in claim 5, wherein

the conical upper conductive body is extended beyond the <u>curved boundary</u> surface of the

dielectric material.

8.   (Original) The biconical antenna as claimed in claim 1, wherein a length of

the conical lower conductive body is shorter than a length of the conical upper conductive

body.

9.   (Original) The biconical antenna as claimed in claim 8, wherein the length of

the conical lower conductive body is at least $\lambda_0/4$, wherein λ_0 is a wavelength when a usable

impulse is the minimum frequency.

10.   (Currently Amended) The biconical antenna as claimed in claim 8, wherein

the conical lower conductive body is extended beyond the <u>curved boundary</u> surface of the

dielectric material.

11.   (New) A biconical antenna for wireless communications, comprising:

a conical upper conductive body and a conical lower conductive body having a

common apex, which is used as a power feed point,

wherein a space between the conical upper and lower conductive bodies is filled with

a dielectric material selected from the group consisting of high-density glass, dielectric

ceramic, and engineering plastic.

12.   (New) A biconical antenna for wireless communications, comprising:

a conical upper conductive body and a conical lower conductive body having a

common apex, which is used as a power feed point,

wherein a space between the conical upper and lower conductive bodies is filled with

a dielectric material, and a length of the conical upper conductive body is different than a

length of the conical lower conductive body, the length of a longer of the conical upper

conductive body and the conical lower conductive body is at least $\lambda_0/4$, wherein λ_0 is a

wavelength when a usable impulse is the minimum frequency.

13.   (New) The biconical antenna as claimed in claim 12, wherein the length of

the conical upper conductive body is longer than the length of the conical lower conductive

body.

14.   (New) The biconical antenna as claimed in claim 12, wherein the length of

the conical lower conductive body is longer than the length of the conical upper conductive

body.